

FIG. 1A

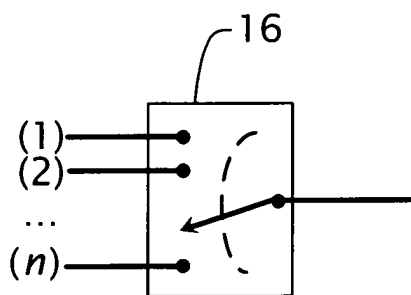


FIG. 1B

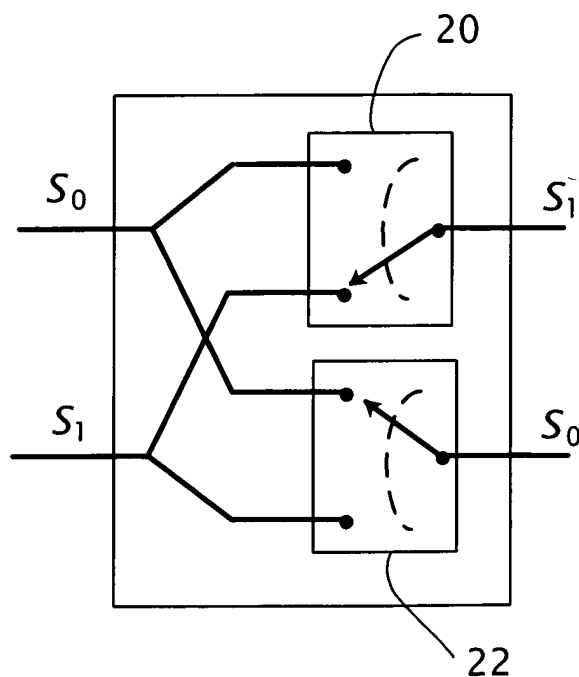


FIG. 1C

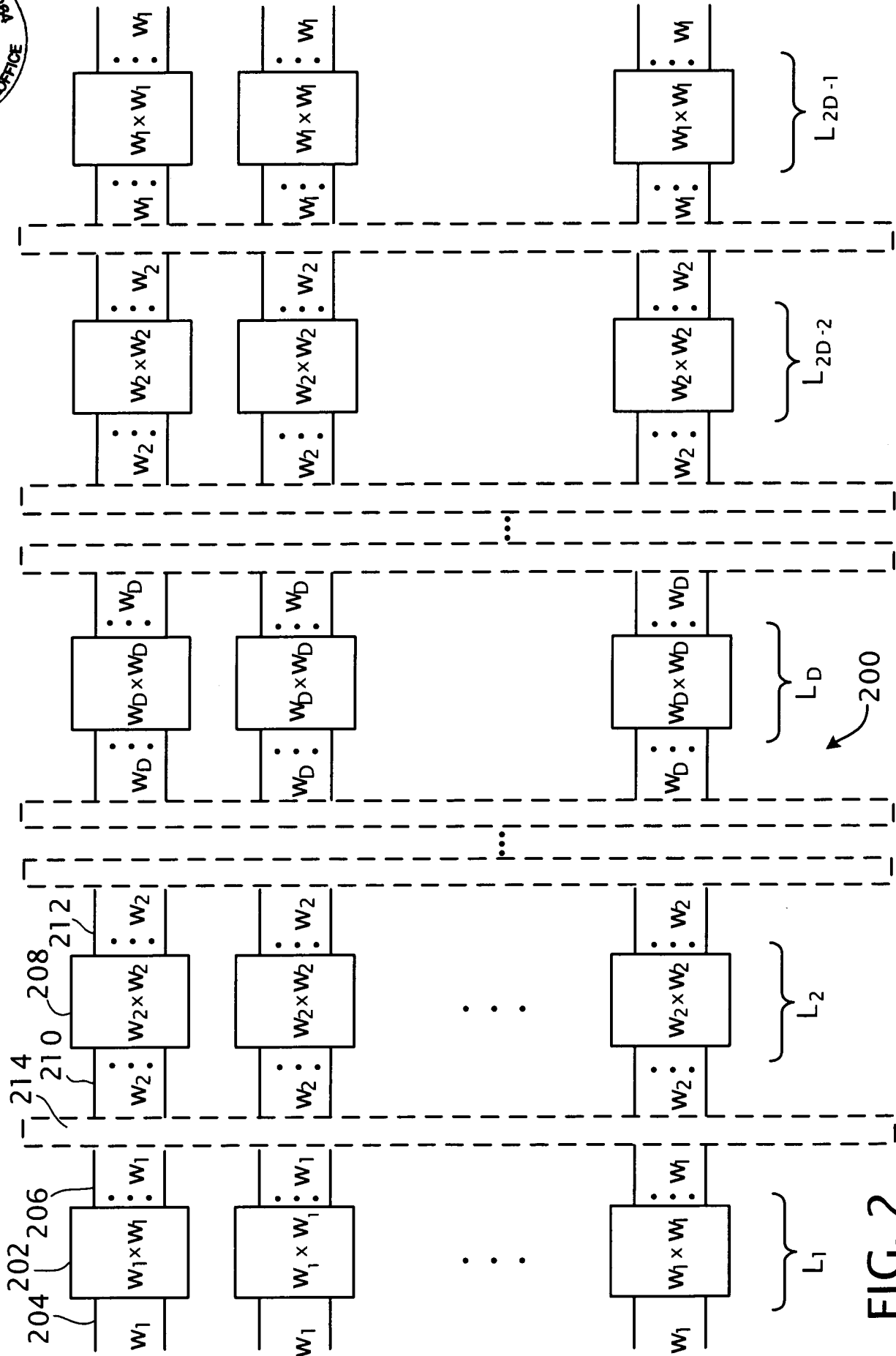
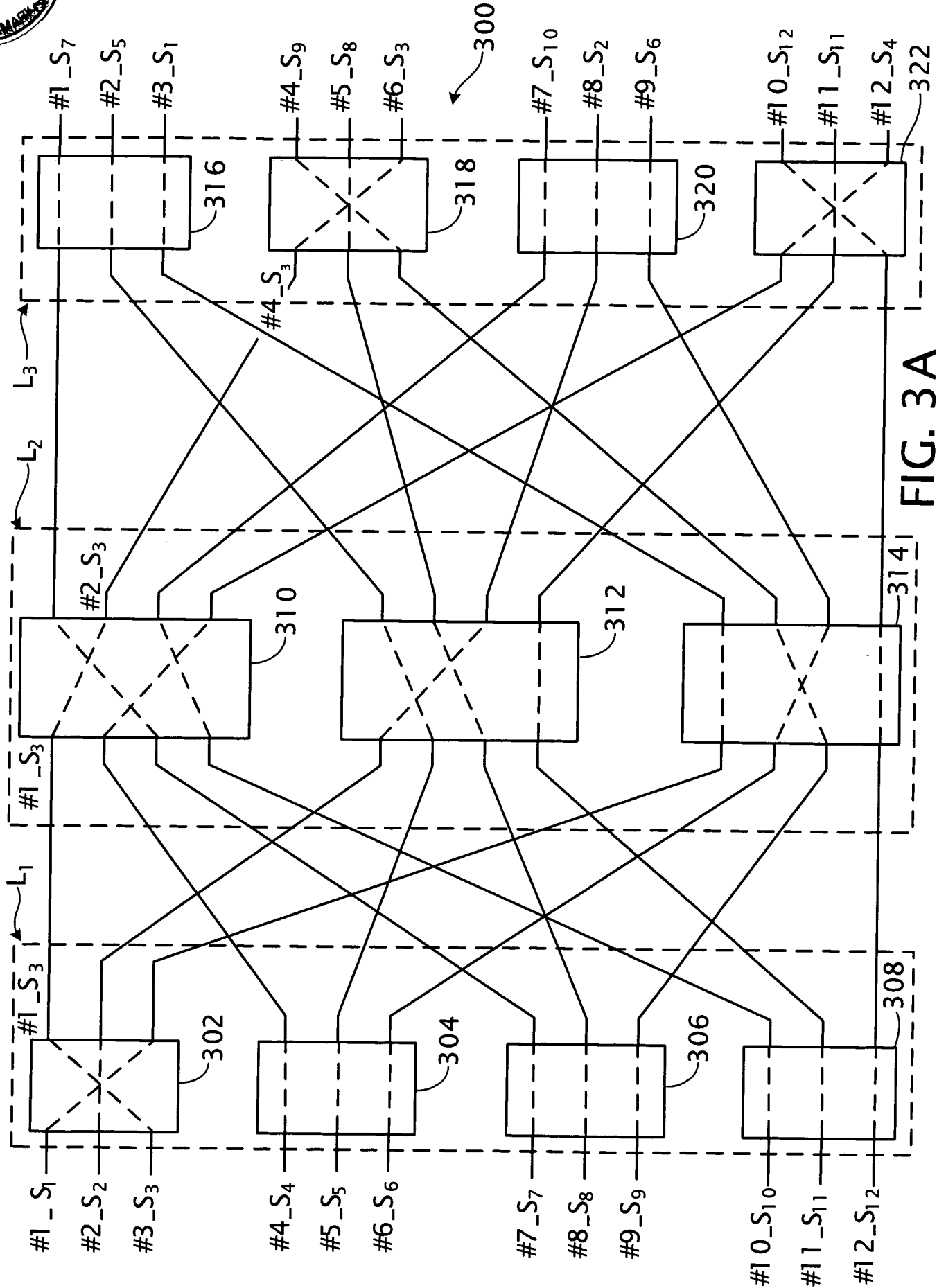
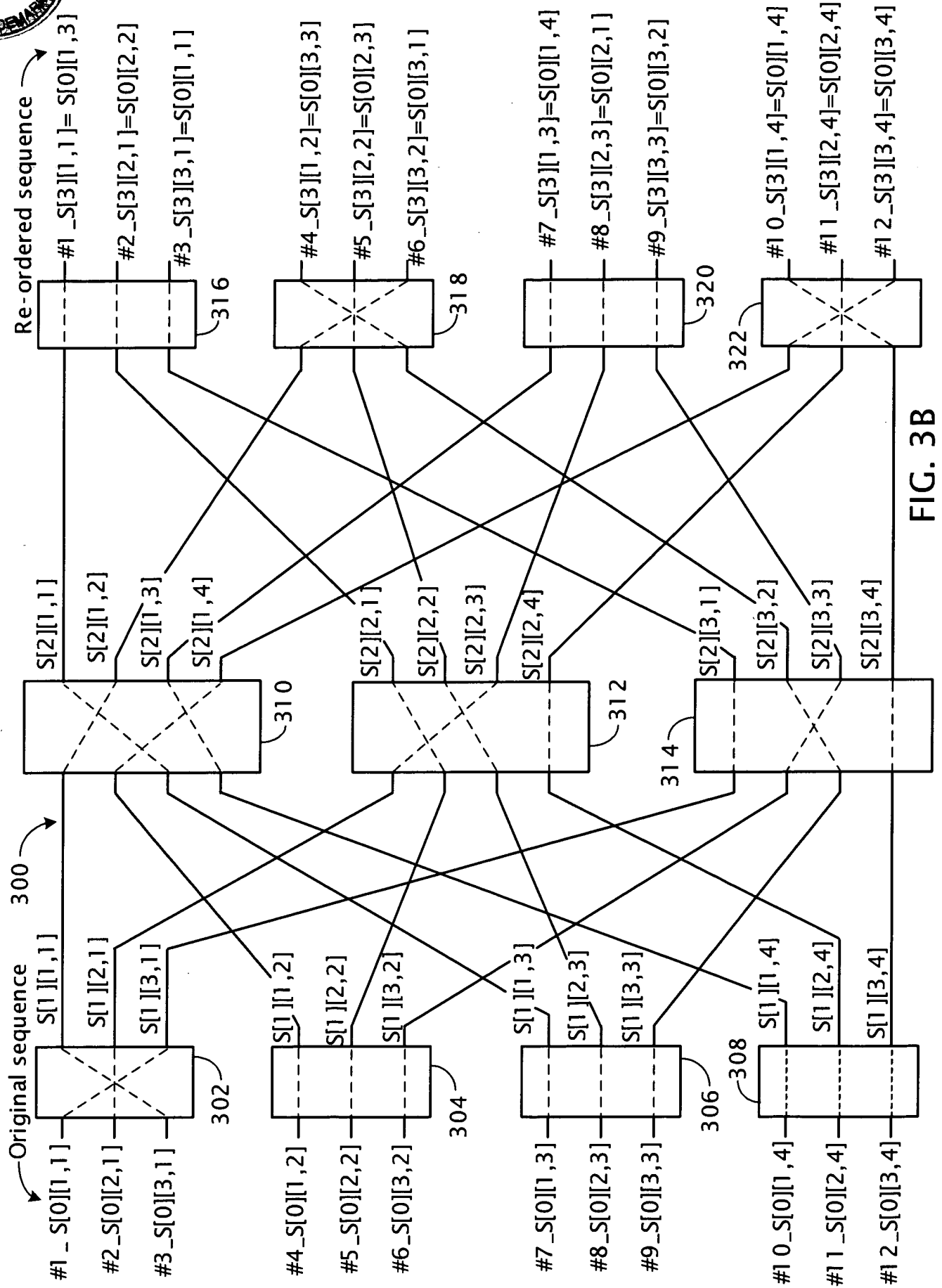


FIG. 2







MAPPING GOAL

Input #1 : [1,1]	—————→	Output #1 : [3,1]
Input #2 : [2,1]	—————→	Output #2 : [2,3]
Input #3 : [3,1]	—————→	Output #3 : [3,2]
Input #4 : [1,2]	—————→	Output #4 : [3,4]
Input #5 : [2,2]	—————→	Output #5 : [2,1]
Input #6 : [3,2]	—————→	Output #6 : [3,3]
Input #7 : [1,3]	—————→	Output #7 : [1,1]
Input #8 : [2,3]	—————→	Output #8 : [2,2]
Input #9 : [3,3]	—————→	Output #9 : [1,2]
Input #10 : [1,4]	—————→	Output #10 : [1,3]
Input #11 : [2,4]	—————→	Output #11 : [2,4]
Input #12 : [3,4]	—————→	Output #12 : [1,4]

FIG. 4A



SWITCH SEQUENCE

[1,1] → [3,1] → [3,1] → [3,1]

[2,1] → [2,1] → [2,3] → [2,3]

[3,1] → [1,1] → [1,2] → [3,2]

[1,2] → [1,2] → [1,4] → [3,4]

[2,2] → [2,2] → [2,1] → [2,1]

[3,2] → [3,2] → [3,3] → [3,3]

[1,3] → [1,3] → [1,1] → [1,1]

[2,3] → [2,3] → [2,2] → [2,2]

[3,3] → [3,3] → [3,2] → [1,2]

[1,4] → [1,4] → [1,3] → [1,3]

[2,4] → [2,4] → [2,4] → [2,4]

[3,4] → [3,4] → [3,4] → [1,4]

L_1 : Exchange first coordinate

L_2 : Exchange second coordinate

L_3 : Exchange first coordinate

FIG. 4B

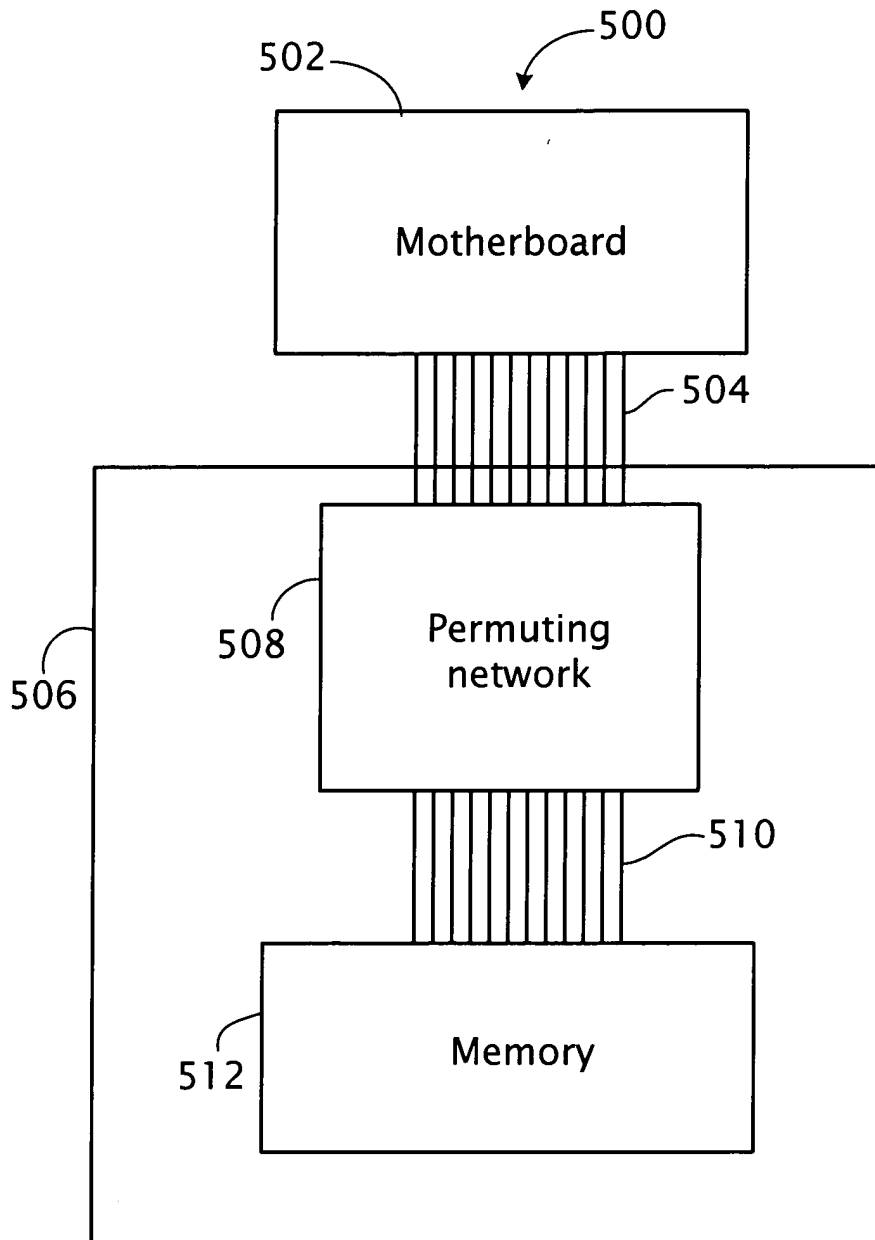


FIG. 5A

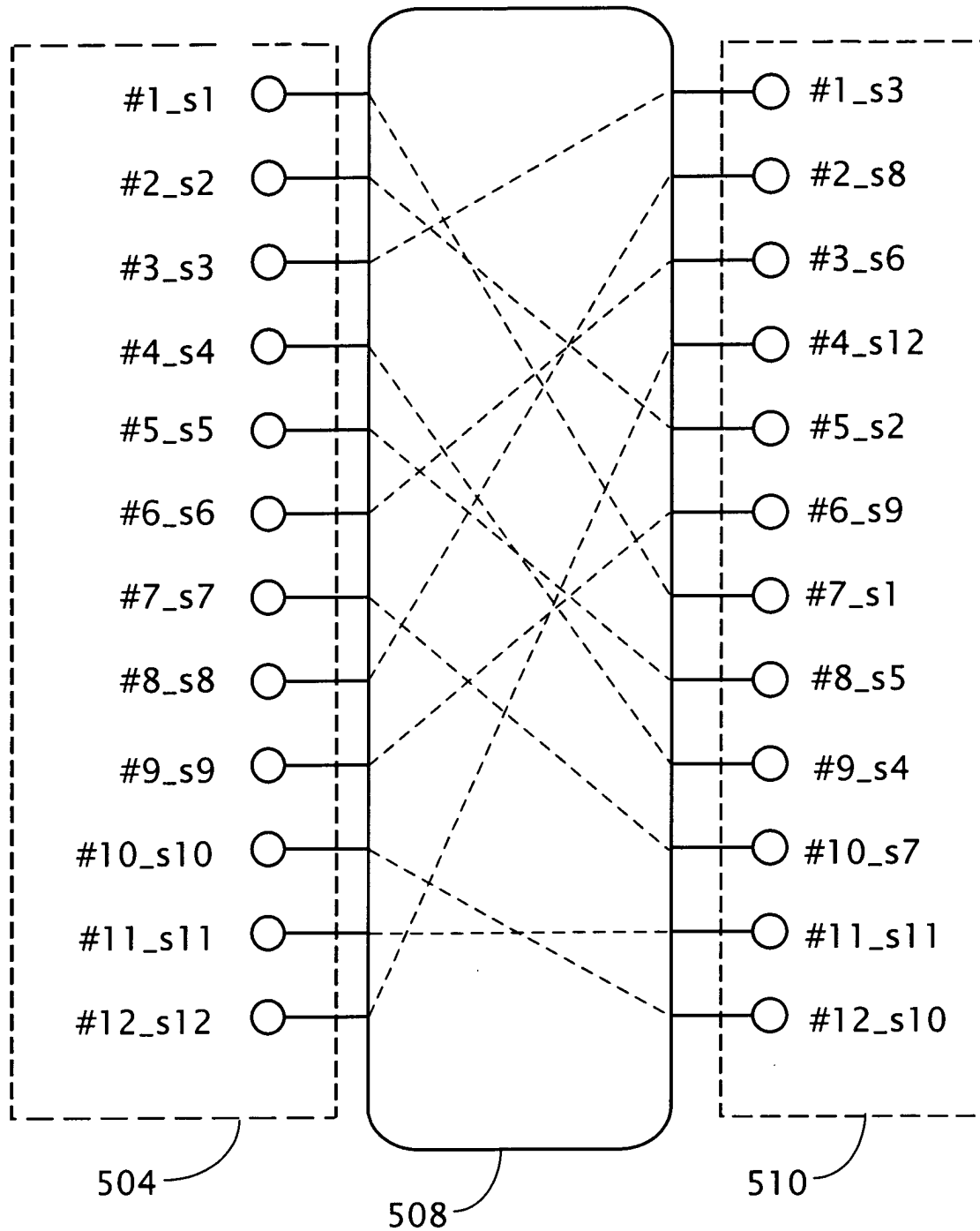


FIG. 5B

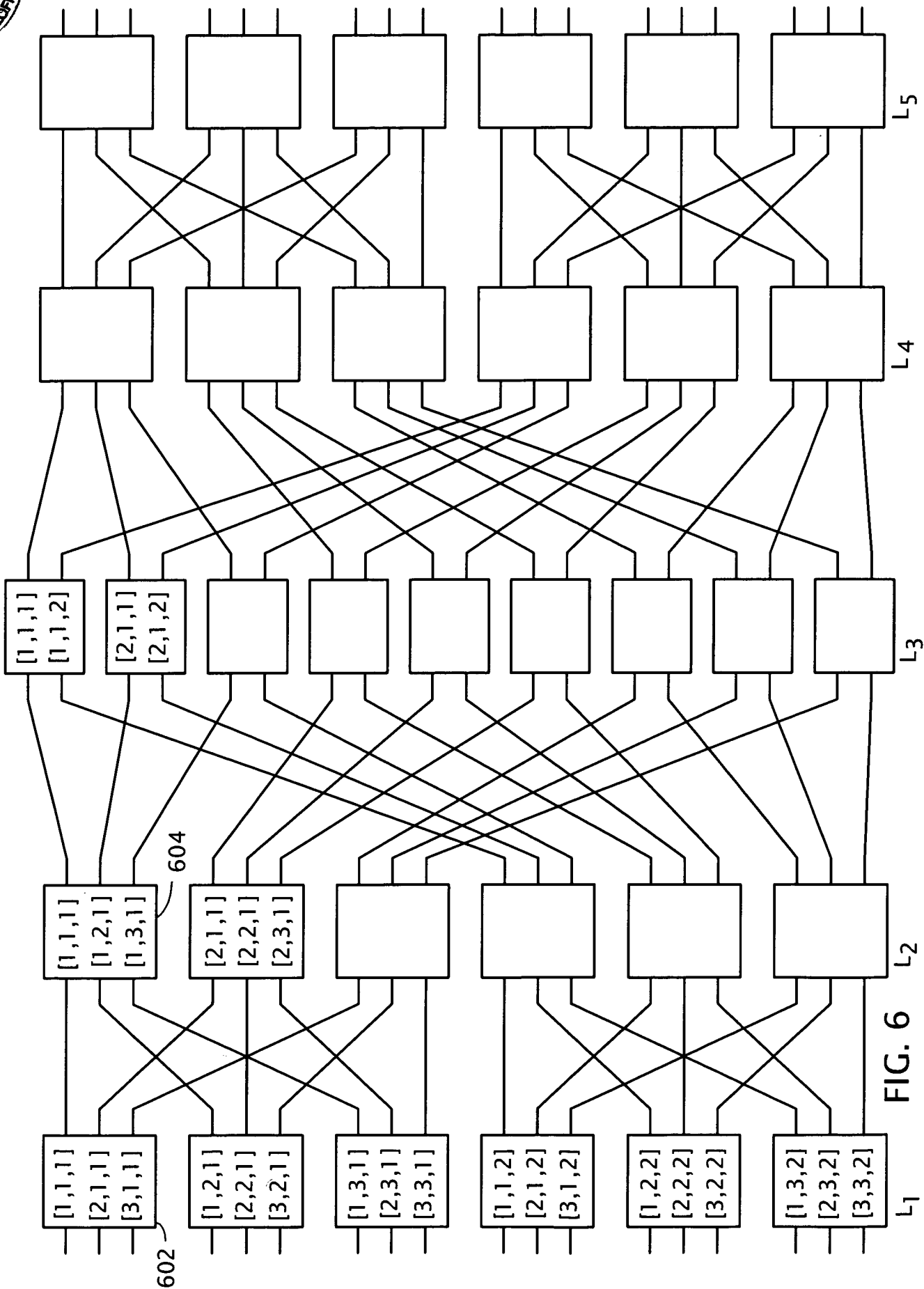


FIG. 6